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THE OHIO STATE UNIVERSITY

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Ways in Which Supervisors Help Student Teachers

By NEAL R. EDMUND AND LYLE HEMINK

THE college supervisor frequently finds that one of the most frustrating aspects of supervising student teachers is the difficulty of determining his own effectiveness. What supervisory practices are most helpful to students? What practices actually inhibit a supervisor's effectiveness? In what ways can he be more helpful to students during their student teaching?

In an attempt to provide more information concerning the effectiveness of college supervisors, a sample of 72 students randomly selected from a group of 160 student teachers at State University College for Teachers at Buffalo were asked the following questions:

1. In what ways have your college supervisors helped you most?
2. In what ways could your college supervisors have helped you more?

The summary of the students' answers to the first question are given in the table which follows. The percentages do not total 100 per cent because each student mentioned more than one kind of help. The combined percentages of the students mentioning each type of assistance were:

	Percentage of Students*
Encouraged the students, showed personal interest in them, and were understanding and sympathetic	65
Gave constructive suggestions	56
Were frank and honest in their criticism	52
Set good examples of how to be friendly and professional	49
Helped students procure materials for teaching	24
Were prompt in keeping appointments	15
Helped students in their planning	14
Were good listeners	7
Observed different lessons each visit	1
Observed for half-day periods	2

* Each student responded more than once and, therefore, it is not possible to total the percentages to 100.

The greatest number of students, 65 per cent, said they were helped most by encouragement from their college supervisors. They were grateful for the personal interest supervisors showed and they especially appreciated the understanding shown in helping them solve teaching problems. Second in the frequency of mention was constructive suggestions. Fifty-six per cent of the students stated they received helpful suggestions, ranging from selecting a film for a social-studies lesson to techniques for improving blackboard writing. "Frank and honest" criticism was mentioned by 52 per cent. The students found such criticism extremely valuable because it helped them identify and isolate needs upon which they could work for immediate improvement. Practicing what one preaches is a seeming virtue not to be ignored in supervision. Forty-nine per cent said they were helped ("inspired and stimulated") by the supervisor's "friendly and professional behavior." Twenty-four per cent of the students received help in procuring materials, stating that in some cases supervisors lent them personal books and other materials on instruction. Fifteen per cent of the group appreciated the promptness of supervisors in keeping appointments. Smaller percentages found long periods of observation helpful to them because the supervisor saw a number of different activities during his visit. Seven per cent were grateful to their supervisors for being "good listeners."

THE students listed ways in which college supervisors helped them, but they listed more than twice that number of ways in which college supervisors could have been more helpful to them. Many of these suggested ways, however, came from a single individual or a small group of two or three, and the suggestions themselves varied widely. The accumulated percentages, which again total more than 100 per cent, summarize the students' answers to the second question:

	Percentage of Students*
Observe the student's teaching performance more often and observe for longer periods	25
Participate in three-way conferences	22
Be more frank and honest in criticising the student's performance	21
Give more time to conferences with student teachers	18
Keep appointments promptly	12
Help students in planning	7
Tell supervising teacher what is to be expected of the student teacher	5
Help students meet needs of problem children	4
Offer more encouragement and show more interest in student teachers	7
Give more help in procuring materials	5
Teach demonstration lessons	..†

	Percentage of Students*
Learn the supervising teacher's methods and don't criticise student for using them to the teacher	..†
Keep own educational opinions and arguments to self	..†
Tell the supervising teacher what her duties are	..†
Don't take notes while student is teaching	..†
Place in a school with another student	..†

* Each student responded more than once and, therefore, it is not possible to total the percentages to 100.

† Percentages for two comments or less are not recorded.

Over 25 per cent suggested that they could have profited from more frequent visits and that the observations should have been longer. Twenty-one per cent reported supervisors could have been more frank and honest in their criticisms; 18 per cent would have liked more three-way conferences involving the supervising teacher, the student teacher, and the college supervisor; and 12 per cent stated that college supervisors could have been more prompt in keeping appointments.

THE findings of this investigation indicate that the kind of supervisory practices described herein are meeting the needs of most student teachers. However, there appears to be a necessity for more emphasis upon the very activities students reported most helpful. For example, 52 per cent of the students derived benefit from frank and honest criticism and 22 per cent favored more frankness and honesty in criticism.

It appears significant to the investigators that 25 per cent of the students felt a need for more frequent observations of their work, for longer observations, and for more time spent in conference with supervisors. The authors know from experience the pressures involved in observing a large number of students and conferring with each of them. They believe, therefore, that students have found the reason for many student-teacher problems. The college supervisor is not around when he is needed most because he has too many students to supervise and too many places to visit.

While the findings of this brief survey have been somewhat reassuring to the members of our supervisory staff, several areas needing more attention and exploration are clearly indicated. These include more frequent and more detailed observation of the student's teaching performance, more help given to the student teacher in dealing with children who have special problems, and three-way conferences.

In today's professional schools of education, student teaching has become widely accepted as an integral part of the program of teacher education. As such, adequate supervision by college personnel becomes essential if student teachers are to gain as much as possible from student-teaching experiences.

Determining what "adequate" supervision entails requires thorough and continuous study of all aspects of student teaching; for example, qualifications of personnel, public-school classroom methods, and, lest we forget, sufficient funds and a realistic supervisory load. Unless this is done, our student teachers are getting less than the best we can afford to provide; these students are not benefiting from a sound supervising program; and, what is more basic, our children are being unnecessarily deprived.

[Vol. XXXVII, No. 3]

Evaluating School Objectives

By R. RODERICK PALMER

EVALUATION in distinction from educational measurement begins with an objective and then seeks the best possible devices for ascertaining the degree to which the objective has been attained. In considering the instruments and devices recently developed for educational appraisal it will, therefore, be pertinent to discuss them in relation to some arbitrarily chosen objectives, equally appropriate for use in the elementary school and the secondary school. In arranging this paper, objectives have been used which are similar to those used by the members of the Evaluation Staff of the Commission on the Relation of School and College of the Eight-Year Study.[1] Rather than to list these topics here, each is set in italics the first time it is mentioned.

THE possession of *functional information* may be appraised by asking pupils questions in which facts are not only to be recalled but are to be put to an appropriate use. Questions may be raised which are not dealt with in the textbooks or reference books employed in the classroom but which can be answered by the use of facts brought out there; or certain facts may be supplied, and questions asked that will require the use of other facts of which the students should be aware. In the Eight-Year Study

[1] Palmer, R. Roderick. "Evaluation: a Reappraisal," EDUCATIONAL RESEARCH BULLETIN, XXXVI (April 10, 1957), p. 139.

a test was developed in which two groups of facts are furnished and the problem is to point out from general knowledge of the situation which of these facts are causally related. By an appropriate method of scoring, the results of this test may be interpreted to show the kind of instruction the group most needs. A teacher can discover, for example, whether his pupils have a wide range of information; whether this information covers specific data, trends, or general principles, or all three; and whether particular individuals are able to distinguish between relevant and irrelevant facts. Further teaching can be planned using these findings.

EFFECTIVE *work habits and study skills* can now be appraised by the use of a great variety of tests. The Tyler-Kimber Study Skills Test, for example, includes finding what is wanted in a book, using an index, using general reference books, recognizing common abbreviations, using the library card catalogue, interpreting maps, knowing current periodical literature, and interpreting graphs. The Iowa Every-Pupil Test of Work-Study Skills for Grades VI, VII, and VIII covers map reading; use of references; use of index; use of dictionary; reading graphs, charts, and tables. J. Wayne Wrightstone's Co-operative Test of Social Studies Abilities for the high school contains a section devoted to similar skills, as does his Test of Critical Thinking in the Social Studies for the elementary school.

These tests are of the objective type. Ability to use the card catalogue, for example, is tested in the Tyler-Kimber booklet by a list of true-false statements such as the following:

In the library card catalogue, one may usually find:
. . . Books listed by title
. . . The address of a given author
. . . Whether or not a certain book contains a bibliography
. . . The number of pages a book contains

Knowledge of current periodicals like the *Atlantic Monthly, U. S. News and World Report, Time, School Life, Senior Scholastic, Fortune, Reader's Digest, Social Science Abstracts, The Annals,* and *Harper's* is checked by asking that each be matched with the appropriate statement in a list presumably characterizing them, such as:

. . . Reports concisely and spicily the news of the week
. . . Summarizes in brief form a large number of scientific articles in social and economic fields

Knowledge of the use of reference materials is tested in the Iowa Every-Pupil Tests by stating a series of questions, each followed by four sources from which the correct source is to be chosen. An example from this test is the following item in which the child is asked to select the source in which the correct answer is to be found:

What are the five largest cities in the world?

(1) a dictionary, (2) an encyclopedia, (3) an atlas, (4) a world almanac

The results of the tests of study skills can also be used as a basis for remedial teaching.

THE child's *range of significant interests* can be ascertained by such methods as direct observation; a study of diaries, logs, and journals written by him; the use of questionnaires; interviews; a record of his activities in his free time; a record of his voluntary contributions to class projects; or by a test of the kinds of general information which he has accumulated. Observation is most valuable in the case of the younger child, for he has not yet acquired the habit of disguising his interests. The same is true, though to a somewhat lesser degree, with reference to the diaries and other records of thoughts and activities kept by the child. The questionnaire is, of course, valuable exactly in proportion to the frankness with which the questions are answered, for a tendency to give the reply which will be approved rather than the one which represents the precise facts of the case is frequently present. An interview based on the completed questionnaire is a desirable checking device.

The questionnaire may take different forms. In one form, the questions are direct, as when the pupil is asked to check in a set of activities (tennis, dancing, camping, reading books, and so on) those in which he has recently engaged, and then to indicate in the list of nearly one hundred the three which he likes best. In another form the pupil may be asked which of a list of activities he likes, those to which he is indifferent, and those which he dislikes. As supplementary information he may also be asked to name activities in which he has had experience and those in which he wishes some increased opportunities for experience. Records of free-time activities, although they may indicate what was open to the child rather than what he wished to do, have the advantage of indicating choices actually made rather than those which the pupil thinks an adult would like him to make. Attend-

ance at concerts, theaters, motion pictures, and the like are helpful in indicating interests. His reading preferences may be more accurately shown by a list of the books and magazines he voluntarily perused than by a checking of topics, if it can be assumed that the record is accurate and that a wide choice of material is available. In some cases it is possible to list the books the pupil has withdrawn from the library for recreational reading. The phase of a class problem chosen by the pupil for special study will also reveal something of his current interests.

When dealing with the older student, some test makers hold, much can be learned about his interests by a test covering a wide range of general information. The topics on which the student is well informed are those to which his interests lead him in his reading. The Cooperative Contemporary Affairs Test,[2] built upon this theory, is divided into six sections representing, respectively, political events, social and economic events, science and medicine, literature, fine arts, and amusements. The items are arranged in multiple-choice form and on the whole require only superficial information. Great differences among individuals are revealed by this test. Those persons who are planning to enter engineering are usually well posted in science; those planning to enter public life make high scores on political and social events and poor ones on scientific events. Striking sex differences are also revealed, with women better posted in literature and fine arts than in science and men least informed in the first two areas. These differences are confirmed by other means, such as a list of best-liked magazines. The interests are then revealed. A test of this sort has the advantage of accuracy, since the answers cannot be chosen on the basis of what is likely to please the tester, and of ease in scoring. It has the evident disadvantage of indirection, since it measures information, in order to obtain a record of another attribute, interest. Further experiment with tests of this sort seems desirable, as well as a development of elementary-school tests.

THE development of *social attitudes* can be ascertained by observation of children at work or by the use of paper-and-pencil tests. Observation will be aided by the use of a check list of types of behavior indicating certain types of attitudes. The tests and scales concerned with social attitudes are of several different kinds. In one of the simplest, the pupil is given lists of words and is asked to cross out those which immediately impress him as

[2] Revised annually by Cooperative Test Service, 15 Armsterdam Avenue, New York.

indicating something disagreeable. If his response is inconsistent, a valuable lead is given the teacher as to the kind of instruction needed. A commoner type of test supplies a list of short, direct statements about some controversial issue and asks the pupil to check those with which he agrees and to mark with an x those with which he disagrees. Each statement has a numerical value, known to the tester, which indicates its degree of approval or disapproval of the matter under discussion. By adding the scale values of each of the statements it is possible to see how far the pupil tested is to the "right" or the "left" on the particular issue.[3]

A slightly more intricate form of this sort of test asks the pupil to make a large number of choices. He may be asked to show whether he agrees with the whole statement, is undecided about it, or disagrees with it; or he may be asked to choose among five possible opinions—strongly approve, approve, undecided, disapprove, strongly disapprove. Some of these scales deal with a large number of issues at once and attempt to get an indication of the pupil's social outlook in general.

THE degree of *social sensitivity* attained by students, involving among other things a disposition of the individual to project himself sympathetically into the lives and problems of other people and to consider the effects of his personal actions upon the welfare of others, may be appraised by the use of such devices as:

Recordings of conversation regarding controversial issues

Reports of occasions designed to stimulate the individual's reaction

Records of selective observation including behavior under each of the school's major objectives

Written work indicating by the topic chosen or by the treatment significant social interests

Lists of books read and book reviews written by the student

Statement by the student of his plans and hopes for his life after high school

Case studies of individuals

Tests—paper and pencil—allowing the student to respond to a wide range of suggested situations and permitting the teacher to compare the responses made to different situations

THE development of *appreciation* can hardly be discovered by the many existing tests of knowledge about literature, history, and biography or by the several tests of ability to discriminate between good and bad literature. If the objective in teaching literature is taken as extension of the breadth and depth of inter-

[3] *See* H. H. Remmer's studies in attitudes published by Purdue University.

est in literature and the resultant enjoyment of it, then the natural method of measuring success in teaching literature is to get a record of new interests and of types and amounts of leisure-time reading. The same remarks apply to the teaching of music and the graphic arts.

IN RECENT years, the evaluators have probably made greater progress in devising appraisals of the development of *effective ways of thinking* than in measuring any other objective. Thinking has been analyzed into its various phases and separate instruments of appraisal constructed for many of them. The ability to interpret data, one phase of effective thinking, has been tested by supplying the student with a set of facts followed by a series of statements representing sound and unsound interpretations of the facts. Each of the statements is to be marked in one of five ways: true, probably true, evidence not sufficient for a decision, probably false, and false. The facts are sometimes supplied in paragraphs but oftener in charts and tables. The students' answers may be appraised as a basis for conference and for remedial teaching, in terms of such criteria as these:

Relevance: Are his interpretations relevant to the data?

Caution: Are the inferences he draws justified by the data or does he go beyond the data without recognizing that he is making only a tentative hypothesis?

Consistency: Are the conclusions or hypotheses consistent with all the available data?

Comprehensiveness: Does he utilize all of the relevant data or do his interpretations fail to take certain items into account? Does he use other relevant information he possesses in interpreting the particular set of data?

Accuracy: Are his interpretations as accurate as the data permit or are they only rough approximations?

Objectivity: Is he able to derive relevant conclusions when these conflict with his own preconceived beliefs?

Perception of relations: What range and what types of relations does he perceive among the various items of the given data?

Recognition of trends: Does he recognize chronological trends when these are indicated? Does he exercise appropriate precautions in interpreting and projecting such trends?

Recognition of bias: Does his interpretation indicate an awareness of various types of misrepresentations and bias, such as the omission of significant facts, optical illusions in charts and graphs, . . . etc.?

Types of problems: Relating to what range and what types of problems does he make satisfactory interpretations of data? What types of problems cause difficulty?[4]

The ability to apply principles in new situations has been tested by describing a situation involving a problem and either asking the student to explain what has been observed to happen when certain things are done or asking him to predict what will happen if certain things are done. The ability to discriminate between sound and unsound arguments has been tested by supplying a paragraph leading up to a definite conclusion which is underlined, asking the student to indicate whether he agrees with this conclusion, and asking him to choose from a considerable list of brief statements following the paragraph those which support the conclusion, those which tend to undermine it, and those which would have to be assumed true if its conclusions were to be considered true. In another form, three conclusions are furnished, from which the student selects the one he considers sound, after which he checks from a list of six reasons those which support the conclusion he has chosen.

From the types of evaluating devices which have been cited, it seems evident that a great deal of progress has been made in recent years toward a school appraisal which will take into account all the most important objectives of education. Instead of measuring a restricted number of educational results for which we have long possessed measuring instruments, and then inferring from these few the status of the school with reference to all other objectives, it may presently be possible to give a reasonably accurate picture of the school's performance in all the most significant areas of education. More important, it will then be possible to advise children and parents of the progress that is being made by individuals toward each of the important objectives, and to make clear to teachers the kind of instruction that is needed to attain the objective more effectively and consistently.

[4] American Education Fellowship, Commission on Secondary School Curriculum. *The Social Studies in General Education.* New York: D. Appleton-Century Company, 1940, p. 365.

A Reappraisal of Marking Practices

By ALBERT K. KURTZ AND MORTON A. BERTIN

Diverse scholastic groups frequently are accorded varying positions of esteem in academic as well as in lay circles. Aside from those hierarchies established in terms of interuniversity prestige, there are also intra-university rivalries. Academic degrees in a single school may occupy widely divergent positions of status. Numerous studies have attempted to resolve, once and for all, the touchy problems involved in determining interdepartmental values. Unfortunately, most such efforts reflect one or another particular point of view, so that personal bias and background often supplant fact. More inquiries of an empirical and objective nature are indicated.

Harvey Alpert and Robert O. Stripling attempted to determine the relationship between marks received by Education majors in courses in Education, and the marks acquired by these same students in their major fields in the College of Arts and Sciences.[1] They specifically attempted to discover whether marks received in subjects taught by members of the faculty of the College of Education differed significantly from those in the student's major subjects taught by the faculty of the College of Arts and Sciences. They selected the 101 most recent graduates of the College of Education in the field of secondary education who met certain criteria, and compared their marks in the two categories just described. It was assumed by those authors that students should have the same degree of motivation in these two groups of courses. They then made three comparisons:

1. Education courses excluding practice teaching and major teaching field
2. Education courses including practice teaching and major teaching field
3. Education courses excluding practice teaching and Education courses including practice teaching

The major teaching fields were restricted to English, mathematics, science, and social studies. They reported significant differences for the last two comparisons, but not for the first. Asserting that

[1] "A Comparison of Marking Practices," Educational Research Bulletin, XXXIV (January 12, 1955), pp. 10–14.

no valid comparison could be made between marks in practice teaching and those in subject-matter courses, Alpert and Stripling concluded that no significant differences exist between the marking practices of the College of Education and of the College of Arts and Sciences.

For numerous reasons, it is evident that both the primary assumption and the conclusion are subject to re-examination. It is not at all clear why a mark in practice teaching which "is determined by over-all performance in a teaching situation" should be excluded from the over-all mark. Such reasoning might easily be extended to cover marks in seminar, laboratory, and even classroom performance. Moreover, an analysis of the data presented in the article brought to light errors of a less ambiguous nature. Alpert and Stripling reported means and standard deviations for their three grade-point averages. It was impossible for us to check these computations (as will be explained later).

When

$$N = 101$$

it is necessary to divide by

$$\sqrt{N-1}$$

in order to obtain

$$\sigma_M$$

These three divisions by 10 were carried out correctly by Alpert and Stripling. They derived six other figures from these, and every one of them is in error. It appears, from the first type of error, that they must have used the incorrect formula

$$\sigma_{(M_1-M_2)} = \sqrt{\sigma^2_{M_1} + \sigma^2_{M_2}}$$

for the standard error of the difference. (All three of their standard errors of differences can be obtained from the given standard errors of their means by this formula and all three would have been much smaller if the correct formula had been used.) This neglect of the correlation term invalidates: first, all three standard errors of the differences; second, all three critical ratios; and, of course, third, all conclusions based upon these erroneous figures. Furthermore, in computing one of the critical ratios, it appears that there was a reversal of numerator and denominator so that instead of dividing .06 by .07 and obtaining .86, .07 was divided by .06 and the quotient (actually 1.17) was recorded as 1.16. Obviously, it seemed appropriate to recompute

all of Alpert and Stripling's figures. This objective turned out to be unachievable.

In order to review their study, we asked Alpert and Stripling to permit us to examine the original data. We were informed that these were not available. Names of the students whose records constituted the data for the study were likewise said to be unavailable. Finally, we were told that it was impossible for them to explain the basis of classification at the present time, though perhaps this might be done next fall. In view of this, we chose our cases on the basis of the criteria of selection published by Alpert and Stripling. Lists of the most recent graduating classes of the University of Florida College of Education were obtained. We then set up the following criteria:

1. Students must have graduated in secondary education.
2. It being assumed that a student would practice teach in his major field, subjects were restricted to those whose teaching major was English, mathematics, science, or social science. Group majors were classified according to the subject first listed.
3. No student was accepted who transferred from another university with more than 6 credit-hours, nor who started at the University of Florida and accumulated more than 15 credits at another university even though he returned later to complete his courses and graduate. (In the few cases in which students took a negligible amount of work elsewhere, this work was ignored.)

Records were obtained for all students who graduated in the seven classes from June, 1954, through June, 1956. All students who met the criteria just given were included, and no one was eliminated for any other reason.

THE seven grade-point averages shown at the left of Table I were computed for each of the 113 students. These were averaged for each of the four teaching majors shown at the top of the table (*see* Columns 2, 3, 4, and 5) and for the entire group of 113 students (*see* Column 6). The seven categories are here arranged according to the grade-point averages of the total group (given in the last column). The highest marks (averaging 3.33 or *B*+) are given in practice teaching and the next highest in Education courses. At the low end of the scale are the marks in Comprehensive courses[2] which are usually, but not always, lower than the Arts and Science marks.

[2] These are basic lower-division courses in English, American Institutions, logic, mathematics, humanities, and physical and biological sciences. In many institutions they would be regarded as additional Arts and Science courses.

Table I thus presents conclusive evidence that the mean marks for Education courses with or without practice teaching, as well as practice teaching by itself, are higher than those for any of the other categories. There are large differences between marks in Education courses, on the one hand, and marks in various Arts and Science or Comprehensive courses, on the other. Each subject, as in the Alpert and Stripling study, acted as his own control; hence, there can be no doubt that they were equated in terms of ability.

TABLE I

AVERAGE MARKS IN SEVEN SUBJECT-MATTER FIELDS, AS GIVEN TO STUDENTS WITH VARIOUS TEACHING MAJORS

	English (47)	Mathematics (19)	Science (15)	Social Studies (32)	All Students (113)
(1)	(2)	(3)	(4)	(5)	(6)
Practice teaching	3.37	3.58	3.40	3.09	3.33
All Education courses	3.18	3.38	3.22	3.02	3.18
Education courses excluding practice teaching	3.04	3.24	3.09	2.96	3.06
Teaching major	2.79	2.94	2.47	2.58	2.72
All Arts and Science courses	2.70	2.91	2.52	2.53	2.66
Arts and Sciences other than teaching major	2.61	2.71	2.63	2.40	2.57
Comprehensive courses	2.34	2.96	2.66	2.35	2.49

Table I contains 15 figures based on marks in Education courses with or without practice teaching. The lowest of these is 2.96. The table also contains 20 figures based on marks in Arts and Science and Comprehensive courses. By an odd coincidence, the highest of these is also 2.96. In other words, the 47 English majors not only received higher marks in their Education courses than in their own courses, but they also received higher marks in their Education courses than any group received in non-Education courses. With the exception of the one tie of 2.96, this is true for all four teaching major groups and for the total group. For all four teaching majors, students get higher marks in Education courses than either they or any other group gets in its teaching major, in other Arts and Science courses, or in Comprehensive courses. (There are 15×20 or 300 such comparisons that can be made. There are no reversals, there is only one tie, and the other 299 support this conclusion.)

The reader may well say that some of the 300 such comparisons are unimportant. For example, does it really matter whether 19 mathematics majors received higher marks (3.38) in all their

Education courses than did 47 English majors in their Comprehensive courses (2.34)? The writers agree, but it is very important to determine whether certain of the differences within columns are statistically significant or are merely chance fluctuations. A number of such comparisons are shown in Table II.[8]

THE first three rows of Table II give the most important comparisons—the ones which are most relevant to the problem Alpert and Stripling set out to solve. The evidence is overwhelming. There is no doubt whatever that students of equal ability (since they are identical students) receive higher marks in Education courses than they do in their teaching major, in all Arts and Science subjects, or in their Comprehensive courses. The t ratios of 9.3, 12.1, and 11.3 are among the largest the writers have ever encountered for a group of only 113 cases. (A t of 3.4 or higher could arise by chance only once in a thousand experiments if there were no real difference. The odds against there being no differences in these marking practices are roughly of the magnitude of betting our national debt against a dollar.)

In the writers' opinion, the next three rows of the table are not particularly important, since, as mentioned earlier, we see no more reason for excluding practice teaching from other Education courses than there would be for excluding bacteriology or religion (which also give high marks) from the grade-point average in Arts and Science courses. This exclusion was made solely because Alpert and Stripling did so. It is still true that Education marks, even without practice teaching, are higher than others, though it is interesting to note that the difference between practice teaching and other education courses, while significant, is less significant than any of the preceding differences. The last row of comparisons in the table shows that students whose teaching majors are English or social studies get higher marks in those subjects than they do in their Comprehensive courses, while there is no appreciable difference or it is reversed

[8] All figures shown in Tables I and II were computed to at least one or two more places than here shown. The subsequent rounding results in a few apparent inconsistencies. Thus, in the comparison of all Education courses minus all Arts and Science courses for the total group, $3.18 - 2.66 \neq .51$, but since the actual figures are $3.1756 - 2.6648 = .5108$, these have been correctly recorded to two decimals as 3.18, 2.66, and .51. Also, although a t ratio of -2.70 is significant beyond the .01 level of confidence, our -2.7 is not so indicated because it is actually -2.66, which does not quite reach this significance level. These technical points are probably of little consequence, but if anyone wishes to check on these or on more important aspects of the problem, all data and computations will be available.

TABLE II

Differences in Grade-Point Averages in Various Subject-Matter Fields, and their Statistical Significance

	Differences in Means and Standard Errors of Differences (in Italics)					*t* Ratio				
	English	Mathematics	Science	Social Studies	All Students	English	Mathematics	Science	Social Studies	All Students
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
All Education courses minus teaching major	+.39 *.073*	+.44 *.130*	+.75 *.143*	+.44 *.088*	+.46 *.049*	5.3‡	3.4†	5.2‡	5.0‡	9.3‡
All Education courses minus all Arts and Science courses	+.48 *.058*	+.47 *.118*	+.70 *.127*	+.49 *.081*	+.51 *.042*	8.3‡	4.0‡	5.5‡	6.0‡	12.1‡
All Education courses minus all Comprehensive courses	+.84 *.091*	+.42 *.136*	+.56 *.161*	+.67 *.121*	+.69 *.061*	9.2‡	3.1†	3.5†	5.5‡	11.3‡
Education courses excluding practice teaching minus teaching major	+.24 *.074*	+.30 *.137*	+.61 *.131*	+.38 *.093*	+.34 *.050*	3.3†	2.2*	4.7‡	4.1‡	6.8‡
Education courses excluding practice teaching minus Comprehensive courses	+.70 *.077*	+.28 *.149*	+.43 *.132*	+.61 *.123*	+.57 *.057*	9.0‡	1.9	3.2†	5.0‡	9.9‡
Education courses excluding practice teaching minus practice teaching	−.33 *.125*	−.34 *.145*	−.31 *.166*	−.14 *.102*	−.28 *.067*	−2.7*	−2.3*	−1.9	−1.4	−4.1‡
Teaching major minus Comprehensive courses	+.45 *.080*	−.02 *.175*	−.19 *.137*	+.23 *.082*	+.23 *.057*	5.7‡	— .1	—1.4	2.9†	4.0‡

* Significant beyond .05 level.
† Significant beyond .01 level.
‡ Significant beyond .001 level.

for those planning to teach mathematics or science. As can be seen in Table II, the differences obtained for the total group are highly significant in every case, and they are also significant in most instances in the smaller subgroups. Even in the science group, with only 15 students, the difference between grade-point average in science courses and grade-point average in Education courses was highly significant (beyond the .001 level of confidence).

The establishing of differences of such significance is in contradistinction to the figures presented by Alpert and Stripling. Further, they cited a study by McGuire asserting that on the basis of honor-point averages attained in the University College (first two years), students entering the College of Education ranked third from the top, the inference being that the College of Education was getting students of relatively high caliber. But education students almost invariably take some Education courses, while mathematics students take mathematics courses, etc., during their first two years. Hence, the lenient marking practices of education professors, found both in the Alpert and Stripling data and in our own study, must be allowed for before any such ranking can be properly interpreted. In this connection, it may be pertinent to cite the most comprehensive study of the question of which the present writers are aware. Wolfle and Oxtoby secured data on approximately 10,000 college graduates from 40 colleges and universities. They compared different student groups on the basis of scores attained on standard tests of academic achievement. They state that

> there are many more graduate students in education than in any other field, but even so, one of the sad effects of the low salaries and low prestige accorded to the nation's school teachers is the fact that nearly half of the lowest fifth of graduate students in the country are working for advanced degrees in education. They will be guiding the development and influencing the career choices of the next generation of students.[4]

Without in any way attesting to or denying the validity of the foregoing quotation, we are presenting the data which is in itself evidence that regardless of the relative caliber of the students involved, the marking practices of those teaching Education courses are more lenient than of those who teach Arts and Science

[4] Wolfle, Dael, and Oxtoby, Toby. "Distributions of Ability of Students Specializing in Different Fields," *Science*, CXVI (September 26, 1952), p. 313.

and Comprehensive courses. It might be possible to make a case for the students by asserting that higher standards should produce greater effort, although such does not appear to be the case when the marks in Education are compared with other subjects. From the facts elicited by this study it is evident that the marking practices are different. It further follows that the responsibility rests with the faculties of the Colleges concerned. It is beyond the scope of this paper to enter into any discussion of what standards should be established for what courses. Our objective was merely to compare, empirically and without bias, the marking practices in certain Colleges in a single University.

From the data gathered in this study we conclude:

1. There are significant differences between the marks obtained by students of Education in their Education courses, and those obtained in their Comprehensive courses, in their major teaching fields, and in their other Arts and Science courses.
2. Mean marks in Education courses are consistently higher than those in teaching majors, Comprehensive courses, and other Arts and Science subjects. This is true for all four teaching majors.
3. These differences are due to marking practices in the colleges concerned.
4. These conclusions differ markedly from those previously drawn by Alpert and Stripling.

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* * *

A SIX-DAY institute on "Atoms, Missiles, and Men" for outstanding Juniors in high-school science and mathematics classes in four states has been announced by the University of Cincinnati. The institute will be conducted June 15-20. It will be the first of a series of annual institutes to indicate to selected high-school students "how the basic sciences are indispensable in understanding currently popular scientific subjects." Admission will be by invitation only. High-school principals and counselors in Ohio, Indiana, Kentucky, and West Virginia have been asked to nominate boys and girls now completing their junior year and ranking among the top 10 per cent in science and mathematics classes. Faculty members of the University and visiting experts will discuss specific problems to show how physics, chemistry, metallurgy, mathematics, and related fields contribute to this era's scientific achievements.

EDITORIAL COMMENT

A Part of Our Job

A FEW months ago, a group of Ohio State University faculty members were conferring with two officials of the Division of Water of the Ohio Department of Natural Resources about the problem of professional and technical training for persons specializing in water research and water management. The function of the Division of Water is to study water supply and demand in the state and to develop plans and policies for water management. One of the two officials had been trained as a geologist and the other as an engineer. The faculty members, who represented several subject-matter areas, were concerned with improving the University's program of training for specialists in the water-management field.

When the two officials were asked what was the greatest lack in the qualifications of the persons whom they employed, each stated emphatically that it was ability to work effectively with people. They pointed out that it is relatively easy to develop a water-management plan that will meet the present and anticipated needs of a given watershed or community. The great difficulty is in getting the people of the area to adopt and carry out a sound plan. These officials were concerned that the University provide training which would make their future employees more effective in what the late W. W. Charters used to call human engineering.

The need for skill in human relations is by no means peculiar to the field of water management. On the contrary, it is all but universal. Leaders of business and industry, personnel officers, government officials, and others tell us that many more persons have difficulty in their jobs through inability to work with people than through lack of technical competence. This is true not only for jobs like those of salesman or office manager, but for many others where the human-relations component is much less conspicuous. Nor is the need for competence in this field confined to persons in professional and semi-professional occupations; it extends to those in trades, industrial and clerical jobs, and many other positions for which formal education beyond the high school is not ordinarily regarded as necessary. Skill in this area is needed by those in "follower" as well as those in "leader" posi-

tions. It is needed not only for success in a job but also for happy and effective personal living. Meeting this need is an important part of the job of the elementary and secondary school, technical institute, junior college, college, and professional school.

It is easy to say that schools at all levels should help students develop skill in human relations; it is much more difficult to provide an educational program that will be effective in this respect. If we are to be successful in doing this, we need first of all to recognize that it is a major responsibility—a part of our job. It is a responsibility that is increasing in importance. As scientific and technological progress continues, human relations as well as the physical environment become more complicated, and the need for skill in human relations increases. Other institutions—the home, the church, youth organizations, and so on—share with the school the opportunity and responsibility to promote the development of this skill. The best efforts of all of these will be required if the need is to be met.

If it be agreed that training in human relations is a major function of the school, we face the question as to how the school can perform it. Obviously there is no simple answer to this question—no formula that is guaranteed to produce results. Every school and every teacher needs to work at this task in ways that are appropriate to the situation. Certain principles, however, can be stated with a good deal of confidence. First, we shall not accomplish much in the development of skill in human relations by academic study or "preaching" about it. Second, we need to provide for our students opportunity and encouragement for first-hand experiences in dealing with other people in many different types of situations. Third, if students are to profit fully by these experiences, they must have wise, sympathetic counseling and guidance. This in turn means that teaching staffs must be large enough that teachers and counselors can know their students as persons, rather than merely as members of a class or a homeroom.

Critics are correct in saying that American schools have been much less successful than they should have been in providing adequate intellectual training, especially for the abler students. They are wrong if they say that the school's sole responsibility is that of intellectual training. It is psychologically unsound and educationally impracticable to separate intellectual training from other components of personality development. The school is not responsible for the whole education of the child, but it is responsi-

ble, along with other educational agencies, for the education of the whole child. One important phase of this responsibility—one part of our job—is training in human relations.

R. H. E.

THE editors of the EDUCATIONAL RESEARCH BULLETIN acknowledge an error in the mathematical computations used in the article, "A Comparison of Marking Practices," by Harvey Alpert and Robert O. Stripling[1] which appeared in the issue dated January 12, 1955. The need for checking was brought to our attention by Albert K. Kurtz and Morton A. Bertin.

After receiving this criticism, the article was given to the Statistics Laboratory, Ohio State University, for appraisal. D. Ransom Whitney, director of the Laboratory, made the following comments regarding it.

1. For each computed value of t it appears that the authors regarded the correlation as zero for the two sets of measurements used in the computation. This appears to be an incorrect assumption.
2. For the t to test the "significance of the difference between marks received in professional education courses excluding internship mark and marks received in major teaching field . . ." the authors have, I believe, erroneously given the reciprocal of t rather than t.
3. The coefficients of correlation are not given and the measurements are not given. It is impossible, therefore, for the reader to carry out the computations for t.
4. The error which appears to have been made has appeared so often in publications that at least one man[2] has written a paper concerning it.

A copy of the manuscript sent in criticism of the Alpert and Stripling article with a copy of Mr. Whitney's comments were sent to Mr. Stripling. His comments quoted from a letter dated September 30, 1957, follow:

1. Their criticism [the criticism of Mr. Kurtz and Mr. Bertin] is correct in that the proper formula was not used.
2. Had the proper formula been used, it would have been necessary to have a correlation of over .80 for the difference of .06 to be significant at the 5-per cent level. According to Garrett, r's between

[1] Mr. Alpert is Instructor of Educational Psychology at Michigan State University and Mr. Stripling is Professor of Education, University of Florida. When they collaborated, Mr. Alpert was also at the University of Florida as a Clinician in the Central Clinical Service.

[2] Cantor, Gordon N. "A Note on a Methodological Error Commonly Committed in Medical and Psychological Research," *American Journal of Mental Deficiency*, LXI (July, 1956), pp. 17–18.

achievers in academic fields usually run from .40 to .60. Hence, such an r is doubtful.[3]

3. The two studies (Alpert-Stripling and Kurtz-Bertin) were made on different groups. It is possible that both are correct. The only way to check would be to draw another sample for the period preceding the sample studied by Kurtz and Bertin.
4. Kurtz and Bertin imply that we refused to co-operate in supplying the original data that was used for our article. The facts are that Mr. Kurtz, in a letter dated November 22, 1955, was notified that these data had regrettably been lost in transit.
5. I agree in general with the statements made by Mr. Whitney in his memoranda to you.

Mr. Stripling said in his letter: "Two statisticians on our campus checked the statistical data before we submitted it to you for publication. How this error was overlooked by all of us is hard to understand."

The criticism of the Alpert and Stripling article appears elsewhere in this BULLETIN under the title "A Reappraisal of Marking Practices" and is written by Albert K. Kurtz and Morton A. Bertin.[4] This manuscript was also sent to Mr. Whitney. His comments comprised the following mathematical appraisal and two general comments:

1. It is impossible to determine whether the group studied by Mr. Kurtz and Mr. Bertin is comparable to the group studied by Mr. Harvey Alpert and Mr. Robert O. Stripling. The conclusions presented by the papers are not, therefore, necessarily contradictory.
2. We suggest that the paper by Mr. Kurtz and Mr. Bertin be revised and presented for publication as a report of their research with a footnote concerning why the work was done.
3. The space devoted to the criticism of the paper by Mr. Alpert and Mr. Stripling is quite out of proportion to the length of the paper of Mr. Kurtz and Mr. Bertin and the offense of Mr. Alpert and Mr. Stripling.

Mr. Kurtz and Mr. Bertin have not followed the suggestion made in the second comment or regarded the appraisal of their discussion given by Mr. Whitney in the third comment. Their reply was, "We prefer to rest our case on the article."

J.H.M.

[3] Garrett, Henry E. *Statistics in Psychology and Education.* New York: Longmans, Green and Company, 1953, p. 173.

[4] The writers are, respectively, Professor of Psychology and Public Health Service Research Fellow of the National Institute of Mental Health. Both are at the University of Florida.

READINGS

STERN, GEORGE G.; STEIN, MORRIS I.; AND BLOOM, BENJAMIN S. *Methods in Personality Assessment: Human Behavior in Complex Social Situations.* Glencoe, Illinois: Free Press, 1956. 271 pp.

This book, as the title suggests, is concerned with the development and evaluation of methodologies. It describes four methods of assessment—analytical, empirical, synthetic, and configurational—and illustrates their use with various types of cases or samples. Assessment involves not only an analysis of the characteristics of persons, but also of situations. Environmental pressures and rôle demands are analyzed to provide a model of the effectively functioning individual. A great variety of tests, scales, observations, and judgmental assessments is then related to the model.

A new model or set of rôle specifications is developed for each sample of subjects. Small samples are used for the initial testing of assessment methods. But increasingly larger samples are employed as the utility of the various models and assessment methods becomes established. Samples of theological students, teacher trainees, graduate students in physics, college Freshmen, and assessment personnel are studied.

A valuable empirical outcome of the study is the identification of three distinct attitude syndromes, two of which parallel the purported authoritarian and non-authoritarian personality types. The third syndrome, characterized by a cynical concern with ideas and a rejection of personal involvements, is often ignored in studies of personality, attitudes, and prejudice.

The procedures of the research are clearly described in a narrative fashion. Tables of basic data are included, but the authors do not rely upon statistical formulas or tables of data to carry the burden of communication. This is an interesting, readable, and valuable contribution to the literature on personality assessment.

RALPH M. STOGDILL

CHASE, FRANCIS S. *Education Faces New Demands.* Pittsburgh, Pennsylvania: University of Pittsburgh Press, 1956. viii+49 pp. (Horace Mann Lecture, 1956).

Here again is an excellent brief analysis of how the world, and especially American society, have changed in the last decade or so. Also Mr. Chase presents an excellent series of the necessary things to do if we would bring school education abreast of its responsibilities in the changed environment. So far, so good; the problem is how are these things to be done? How can we be free men with "liberated" minds and build youth in this image so that good is multiplied and evil is decimated? Mr. Chase wants the curriculum

re-examined, teacher education imbued with new high purpose, research and experimentation encouraged, the educational administrative pattern redesigned and upgraded. Again all these suggestions are good. Does Mr. Chase have any ideas about what to do now, any bold new hypotheses about approaches to the obvious job before us? He points to two years of experimentation in teacher education at the University of Chicago, and he implies, let us all go out and experiment similarly. Also, he says the way to get more research going is to use the research results we now have. He wants more teamwork in research, and he wants mass production methods in education abandoned. How do we get all things accomplished? First, we can count on present dissatisfaction with the schools as a starter, then we must develop some educational reformers, then a citizen's movement must be formed, political leaders must begin to think educationally, the public press must take an interest, and finally the economy must be capable of "supporting the advance." A nice treatise in educational homiletics; it is good, it is true! But where does it take us? There is no leverage on the problems, because Mr. Chase will not venture beyond intellectual analysis and profound good will.

NORMAN WOELFEL

GORDON, IRA J. *The Teacher as a Guidance Worker.* New York: Harper and Brothers, 1956. xi+350 pp.

This volume is more like a handbook on the material suggested by the subtitle, "Human Development Concepts and Their Application in the Classroom," than a detailed discussion of the teacher's rôle as a guidance worker. The survey characteristic of the book is evidenced by the author's statement, "This book is organized to be used in conjunction with actual first-hand experience in observing a child in a group setting through at least one semester's time" (page 11). This reviewer counted 54 lists on various topics. These lists, together with carefully interwoven quotations from many sources, give the book the appearance of a handbook in its format.

In Part I, the author briefly discusses the meaning of guidance, the rôle of the teacher, guidance and the curriculum, teacher qualifications for guidance work, and the scientific method for studying students. In the four chapters of Part II the author discusses "The Child Is a Growing Organism," "Understanding Community Forces," "Contributions of Peers to Self-Development," and "The Child's Self." The coverage is extensive; the treatment is sketchy.

In Part III, the author focuses attention upon three aspects of the teacher's rôle in guidance: as a group worker, a counselor, and a person engaged in action research. In the discussion of the teacher as a group worker, acumen is displayed in analyzing the forces involved in group work. Recognizing that "many professional counselors resist the notion of the teacher's functioning as a counselor" (page 265), the author discusses the teacher in this rôle. It would have been more accurate to distinguish between the teacher who uses some counseling techniques and the professional counselor who employs a vast variety of counseling procedures. The author's

presentation of the teacher as an "action researcher" on guidance problems is less biased.

The book, together with the author's recommended readings, should stimulate the reader to examine more carefully the teacher's rôle as a guidance worker. The text seems to give comprehensive coverage of many topics, but actually this completeness lies only in the extensiveness of topics mentioned rather than in depth of topical treatment.

HERMAN J. PETERS

DOUGLAS, MARY PEACOCK. *The Pupil Assistant in the School Library.* Chicago: American Library Association, 1957. xii+56 pp.

This booklet is designed to assist the school librarian who wishes or finds it necessary to use student assistants. Miss Douglas gives suggestions and outlines procedures useful in selecting, training, and supervising such students. She acknowledges the help such students may be to the library, and she emphasizes the values that the student gains by close contact with books, library procedures, and the public.

The discussion is very practical and is the first that this reviewer has seen designed for the purpose of assisting the librarian. Manuals for the use and guidance of the student assistant have long been available. Such practical matters are treated as the services which are within the abilities of student assistants, recruiting and selecting them, making out work schedules, planning for the better administration of the library through student help, and assisting the student to gain valuable growth experiences. Related activities, such as library and book clubs, are discussed.

Part II gives illustrations of work schedules, rating instruments, and so on, and quotes, in full, the text of the *Library Helper's Handbook* prepared for the pages in the school library of Raleigh, North Carolina. It also includes a very helpful bibliography.

RUTH SEEGER

HALVERSON, PAUL M., editor. *Frontiers of Secondary Education I.* New York: Syracuse University Press, 1956. vi+22 pp. (Proceedings of the First Annual Conference on Secondary Education, School of Education and Division of the Summer Sessions, Syracuse University, 1956.)

This book is the first in a series planned to parallel a similar series "Frontiers in Elementary Education," volumes of which were published in 1954 and 1955. It consists of the numerous papers and lectures presented at the Summer Conference on Secondary Education held at Syracuse University. As the editor points out, the contents by no means cover the field but are planned to give ". . . only a sampling of areas which need study and discussion" (page iii). Six of the eleven writers deal with the more general, philosophical problems of secondary education. The others discuss problems connected with guidance services; programs for the mentally retarded, for reading improvement, for education of exceptional children; and general business education.

Many issues are raised. In this short review only a few can be little more than named. Several of the writers expressed concern about the ways

in which secondary schools are using and extending the concept of freedom as it affects students and teachers. One area of freedom frequently violated by various lay individuals, groups, or governmental agencies is the making of decisions which in the light of training, background, and responsibility should be made by the teacher who is as much a professional as the doctor, lawyer, or engineer. Closely related are discussions of problems involved in developing moral values and at the same time providing creative experiences. One paper deals with teaching skill in critical thinking to adolescents. Also of great concern to several of the writers is, as they perceive it, the existence of great pressures in our schools toward conformity affecting both teacher and pupil.

A relatively new development in secondary education, as it is discussed by Ivan K. Garrison, is a program for the mentally retarded within the regular secondary school. Unless high schools have particularly stringent admission standards, they have enrolled "unlabeled" mentally retarded students. Mr. Garrison believes that special classes should be provided for them. Two authors disagree concerning programs planned for the gifted student. Harold Alberty questions the advisability of providing special programs for them, although William M. Cruickshank advocates special classes.

O. Richard Wessels favors a general business curriculum to serve all students; he argues that business as an institution of society has an increasing influence on every citizen's daily life. Margaret J. Early believes that reading in the secondary school is a frontier area which is largely unexplored. She describes problem areas which should be studied by a secondary-school staff before committing itself to a reading program. Guidance is described by W. J. Dipboye as a tool to help the young person adjust to life in a democratic society, but he warns that this does not mean that education should ". . . teach the maintenance of the *status quo*" (page 75).

While this set of papers and lectures does not give an integrated or complete account of secondary-school problems, the book is concerned with issues which are timely and significant. It is very stimulating and well worth study.

HAROLD R. PHELPS

YAUCH, WILBUR A.; BARTELS, MARTIN H.; and MORRIS, EMMET. *The Beginning Teacher*. New York: Henry Holt and Company, Inc., 1955. xii+339 pp.

As stated in the Preface, this book has been written to fill the gap between the student's senior year in college and his first few weeks as a beginning teacher. Parts I and II are devoted to discussions of topics which might very well be included in the last professional course before graduation or in conjunction with student teaching. These sections include help in securing a teaching position by pointing up types of jobs and helping the prospective teacher to evaluate himself to determine the job appropriate to his abilities and limitations. Certification and salaries are also given emphasis.

Part III, on the other hand, deals with the problems which may be faced by the beginning teacher. Emphasis here is given to the teacher's relationship with other teachers, with parents, within the community, and to the teacher's personal professional growth.

Each topic is discussed in an easy, readable manner. The authors use practical illustrations as they treat each topic, but at times the reviewer wishes that they had been a little less realistic in order not to discourage the reader.

Each chapter concludes with a summary and bibliography. Many questions heretofore unanswered are comprehensively dealt with. For the graduating Senior as well as the teacher on his first job, the contents should meet a real need.

ISABEL MILLER

PARKER, WILLIAM RILEY. *The National Interest and Foreign Languages.* Rev. ed. Washington, D. C.: United States National Commission for UNESCO, Department of State, 1957. vi+133 pp.

This book is a storehouse of information about the past, present, and future status of foreign-language study in the United States. The author, who was chairman of a committee which made a three-year inquiry into the specific rôle that foreign languages and literatures should thereafter play in American life, is expertly qualified for the task. He declares

> Communication between peoples was always a problem, but, thanks to modern sciences and technology, it is today a problem involving more people, more often, and more speedily, than ever before in the annals of mankind. . . . Never have so many Americans encountered so much foreign speech with so little equipment for communication and so much depending upon communication. A sentence spoken in Paris or Rome or Moscow is read a few hours later in Chicago or Los Angeles, and whether accurately translated or not, who knows? And if literally translated, what connotations of nuances are lost, who knows? (pages 68–69).

Part I, which deals with the current situation, presents some startling facts: Fifty-six per cent of all public high schools in the United States offer no modern foreign language and no more than 14 per cent of the students in public high schools study foreign languages, yet one million two hundred and fifty thousand United States citizens (not including the military) traveled to foreign countries in 1954 (pages 13, 16, and 84). There are not that many students of modern languages in all the public and private secondary schools of our country. In a recent survey of eighteen nations, including the big four, it was found that students in the schools of the United States studied foreign languages the shortest amount of time—two years. In Russia foreign-language study is compulsory for six years, and in most of the European countries it is required for seven or eight years.

On the brighter side of the situation the author traces the rapid growth of foreign-language study in the elementary schools. In 1952 foreign languages were offered in the elementary schools of 89 communities and

today in 357 communities (page 7). Air travel, exchange students, films, radio, the press, television (there are now 30 television stations teaching languages) are all contributing to the development of foreign-language study.

In Part III entitled "Tomorrow's Foreign Language Needs," the author emphasizes the great need for properly equipped instructors and more stringent requirements for teacher certification. Concerning the teachers he reports:

> Few of them speak correctly and fluently the language they teach, for the simple reason that they were never taught to do so and they have lacked the means to visit the country they are supposed to know all about (page 34).

As its title implies, this book was written in the interest not only of teachers and administrators, but of the nation at large.

EDWARD D. ALLEN

BORROWMAN, MERLE L. *The Liberal and Technical in Teacher Education: a Historical Survey of American Thought.* New York: Bureau of Publications, Teachers College, Columbia University, 1956. xvi+247 pp. (Teachers College Studies in Education).

A careful historical analysis of theory and practice in teacher education as it relates to the liberal and technical emphases is presented in this book. The importance of achieving a proper balance between these two phases of a teacher-education program is shown by the following statement:

> If, in their own professional education, teachers become acutely sensitive to the issues involved, and highly appreciative of both the liberal and technical functions of education, they are less apt to ignore either in their own teaching and in making educational policy (page vii).

After covering the problems in this area, the author divides his discussion into consideration of theory and practice in teacher education as follows: prior to 1865; 1865–95; 1895–1930; and 1930–52. In each of the chapters the diverse points of view and practices are well presented. The author points out that the early normal schools largely neglected general education; that some schools added general education in unrelated units; some related it to technical education and some did not; whereas, only recently has the emphasis been more sharply placed on carefully interrelated general education in efforts to bring to the teacher the best understanding and appreciation of the contents of the various disciplines and of their interrelationships.

This reviewer found the chapter on problem areas in the education of teachers very well presented. All of the book is written in a clear and interesting fashion. The reader should obtain a helpful perspective in his consideration of the problem of what is the best combination of experiences in general education in the preparation of an effective teacher.

EARL W. ANDERSON